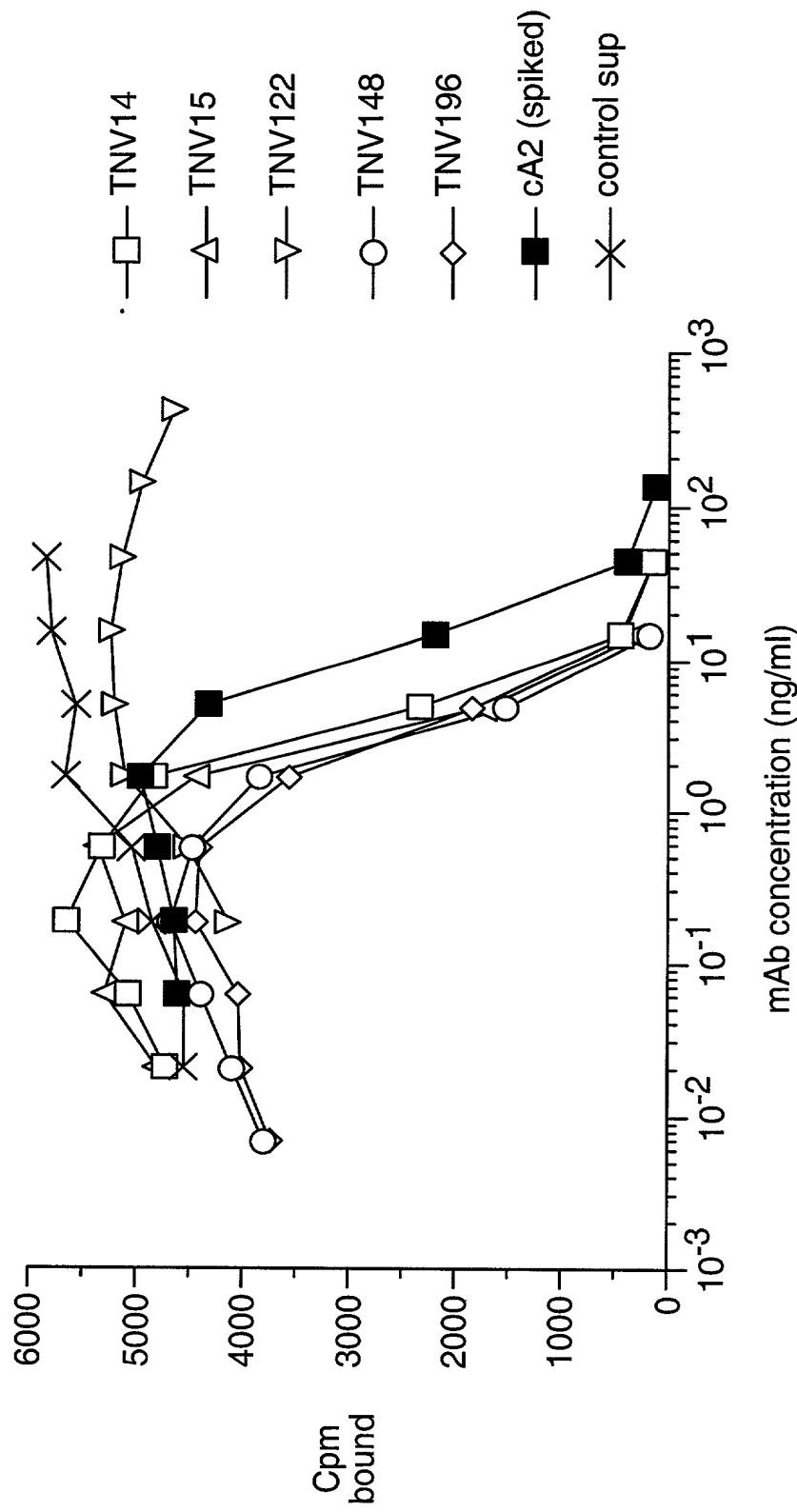


FIG. 1



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FIG. 2A

TNVS ATGGGGTTGGGCTGAGCTGGGTTTCCTCGTTGCTTTAAGA

germline	Q V Q L V E S G G G G V
TNVs	CAGGTGCAGCTGGTGGAGTCTGGGGGGAGGCGTG
TNV148 (B)	GGTGTCCAGTGT..... GGTGTCCAGTGT.....A.....

germline TNVs	V Q P G R S L R L S C A A S G
	GTCCAGCCTGGGAGGTCCCTGAGACTCTCCTGTGCAGCCTCTGGA

	F	T	F	S	S	Y	A	M	H	W	V	R	Q	A	P
germline	TTCACCTTCAGTAGCTATGCTATGCACTGGGTCCGCCAGGCTCCA														
TNV14,15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
TNV148(B)	.	.	.	T	.	.	.	.	.	.	.	.	.	.	.
TNV196	.	.	.	.	.	.	.	.	.	C	.	.	.	.	.

	G	K	G	L	E	W	V	A	V	I	S	Y	D	G	S
germline	GGCAAGGGGCTGGAGTGGGTGGCAGTTATATCATATGATGGAAGC														
TNV14	A	.	C	T	.	.	T
TNV15	T	.	T	.	.	T
TNV148 (B)	.	.	C	.	.	.	.	.	T	.	G	.	.	.	.
TNV196	T	.	.	.	.	.	.

	N	K	Y	Y	A	D	S	V	K	G	R	F	T	I	S	
germline	A	T	A	T	A	C	G	A	G	C	G	R	F	T	I	S
TNV14	.	G	C	.	A	G	.	.	G	.	.	A
TNV15	.	C	.	A	G	C	.	.	.	
TNV148 (B)	.	.	.	A	G	
TNV196	.	.	.	A	G	C	G	.	.	

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FIG. 2B

	R	D	N	S	K	N	T	L	Y	L	Q	M	N	S	L
germline	AGAGACAATTCCAAGAACACGCTGTATCTGCAAATGAACAGCCTG														
TNV14
TNV15	G	.	.	.	.	.	.
TNV148	C	.	.	.	.	.	.	.	.	.	.
TNV148B
TNV196	T	.	.	.	.	.

	R	A	E	D	T	A	V	Y	Y	C	A	R
germline	AGAGCTGAGGACACGGCTGTATTACTGTGCGAGA											
TNV14,15	.	.	.	.	.	.	.	.	.	.	.	GATCGAGGT
TNV148 (B)	.	.	.	.	.	.	.	.	.	.	.	A
TNV196	.	.	.	.	.	.	.	T	.	.	.	.

	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>G</u>	<u>M</u>	<u>D</u>	<u>V</u>	<u>W</u>
germline	T	A	T	A	T	C	A	T	A	T
TNV14	ATATCAGCAGGTGGAA	.	.	.	.	.	.	.	.	.
TNV15	.	.	.	.	.	.	.	.	.	.
G.C.	.	.	A.T.	.	T	.	.	.	.	.
TNV148 (B)	.	G	.	.	A	.	.	.	.	.
TNV196	.	TGG	.	.	A	.	.	.	.	.

	G	Q	G	T	T	V	T	V	S	S
germline	GGGCAAGGGACCACGGTCACCGTCTCCTCAG									
TNV14	.	.	C
TNV15	.	.	C
TNV148 (B)	.	C
TNV196	.	C	.	G

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FIG. 3

TNVs ATGGAAGCCCCAGCTCAGCTTCCTTCCCTCTGCTACTCTGGCTC

germline TNVs	E I V L T Q S P A T GAAATTGTGTTGACACAGTCTCCAGCCACC CCAGATACCACCGGA
------------------	--

germline TNVs L S L S P G E R A T L S C **R A**
CTGTCTTGTCCTCCAGGGAAAGAGCCACCCCTCTCCTGCAGGGCC

germline TNVs G Q A P R L L I Y **D A S N R A**
GGCCAGGCTCCCAGGCTCCTCATCTATGATGCATCCAACAGGGCC

germline T G I P A R F S G S G S G T D
TNVs ACTGGCATCCCAGCCAGGTTCACTGGCAGTGGGTCTGGGACAGAC

germline	F T L T I S S L E P E D F A V
TNVs	TTCACTCTCACCATCAGCAGCCTAGAGCCTGAAGATTTCAGTT

Germline TNVs	<table border="0"> <tr> <td style="text-align: center; width: 10px;">Y</td> <td style="text-align: center; width: 10px;">Y</td> <td style="text-align: center; width: 10px;">C</td> <td style="text-align: center; width: 10px;">Q</td> <td style="text-align: center; width: 10px;">Q</td> <td style="text-align: center; width: 10px;">R</td> <td style="text-align: center; width: 10px;">S</td> <td style="text-align: center; width: 10px;">N</td> <td style="text-align: center; width: 10px;">W</td> <td style="text-align: center; width: 10px;">P</td> <td style="text-align: center; width: 10px;">P</td> <td style="text-align: center; width: 10px;">F</td> <td style="text-align: center; width: 10px;"><u>T</u></td> <td style="text-align: center; width: 10px;">F</td> <td style="text-align: center; width: 10px;">G</td> </tr> <tr> <td colspan="14" style="text-align: center;">TATTACTGTCAGCAGCGTAGCAACTGGCCTCCATTCACTTTCGGC</td> </tr> </table>	Y	Y	C	Q	Q	R	S	N	W	P	P	F	<u>T</u>	F	G	TATTACTGTCAGCAGCGTAGCAACTGGCCTCCATTCACTTTCGGC													
Y	Y	C	Q	Q	R	S	N	W	P	P	F	<u>T</u>	F	G																
TATTACTGTCAGCAGCGTAGCAACTGGCCTCCATTCACTTTCGGC																														

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FIG. 4

TNVs	germline MGFGLSWVFLVALLRGVQC	signal
	
TNVs	germline QVQLVESGGVVQPGRSRLSCAASGFTFS	FR1
TNV148 (B)	.....I..	
TNVs	germline SYAMH	CDR1
	
TNVs	germline WVRQAPGKGLEWVA	FR2
TNV148 (B)	.....N.....	
TNV14	germline VISYDGGSNKYYADSVKG	CDR2
TNV15	I.L....S.K.....D	
TNV148 (B)	F.L....K.....	
TNV196	FM.....K.....	
TNV14	RFTISRDN SKNTLYLQMNSLRAEDTAVYYCAR	FR3
TNV15	.....
TNV148	.....A.....	
TNV148B	.....P.....	
TNV196	...V.....F.....F....	
TNV14	germline -----YYYYYGMDV	CDR3
TNV15	DRGISAGGN.....	
TNV148 (B)	...V....N.....	
TNV196A...N.....	
TNV196G...N.....	
TNVs	germline WGQGTTVTVSS	J6
	

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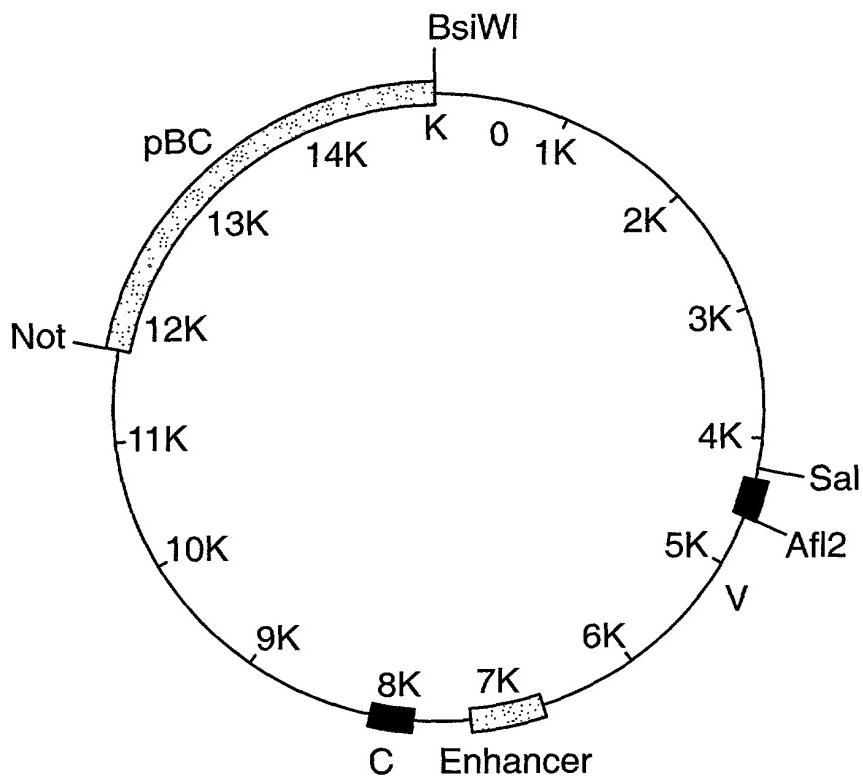
FIG. 5

TNVs	MEAPPAQLLFLLLLWL PDTTG	signal
germline	EIVLTQSPATLSLSPGERATLSC	FR1
TNVs	.....
germline	RASQSVSSYLA	CDR1
TNV14	.....
TNV15	.....
TNV148 (B)	....Y....	
TNV196	....Y....	
germline	WYQQKPGQAPRLLLW	FR2
TNVs	.....
germline	DASN RAT	CDR2
TNVs	.....
germline	GIPARFSGSGSGTDFTLTISSEPEDFAVYYC	FR3
TNVs	
germline	QQRSN WPPFT	CDR3
TNVs	
germline	FGPGTKVDIK	J3
TNVs	

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FIG. 6

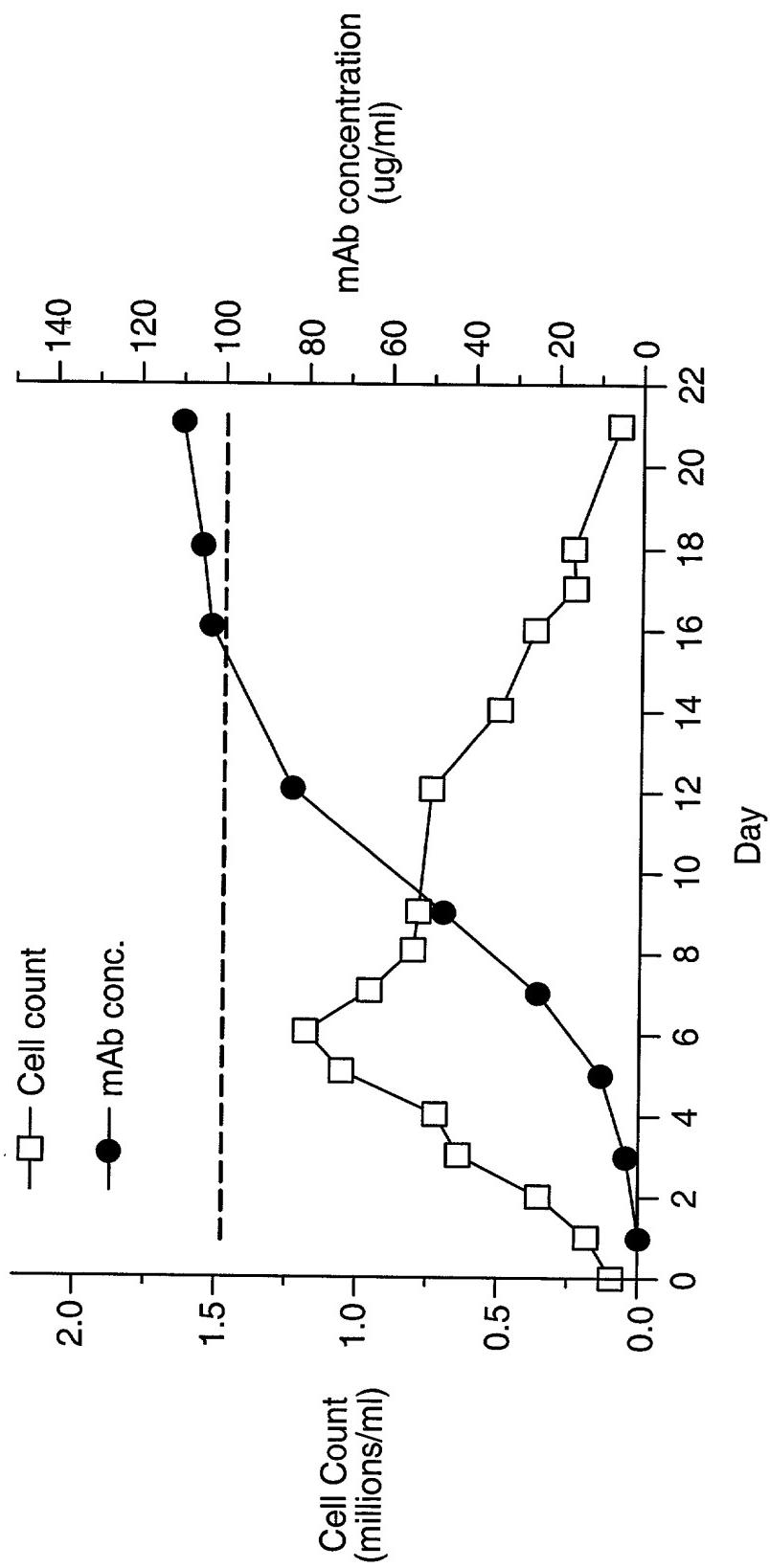
p1776



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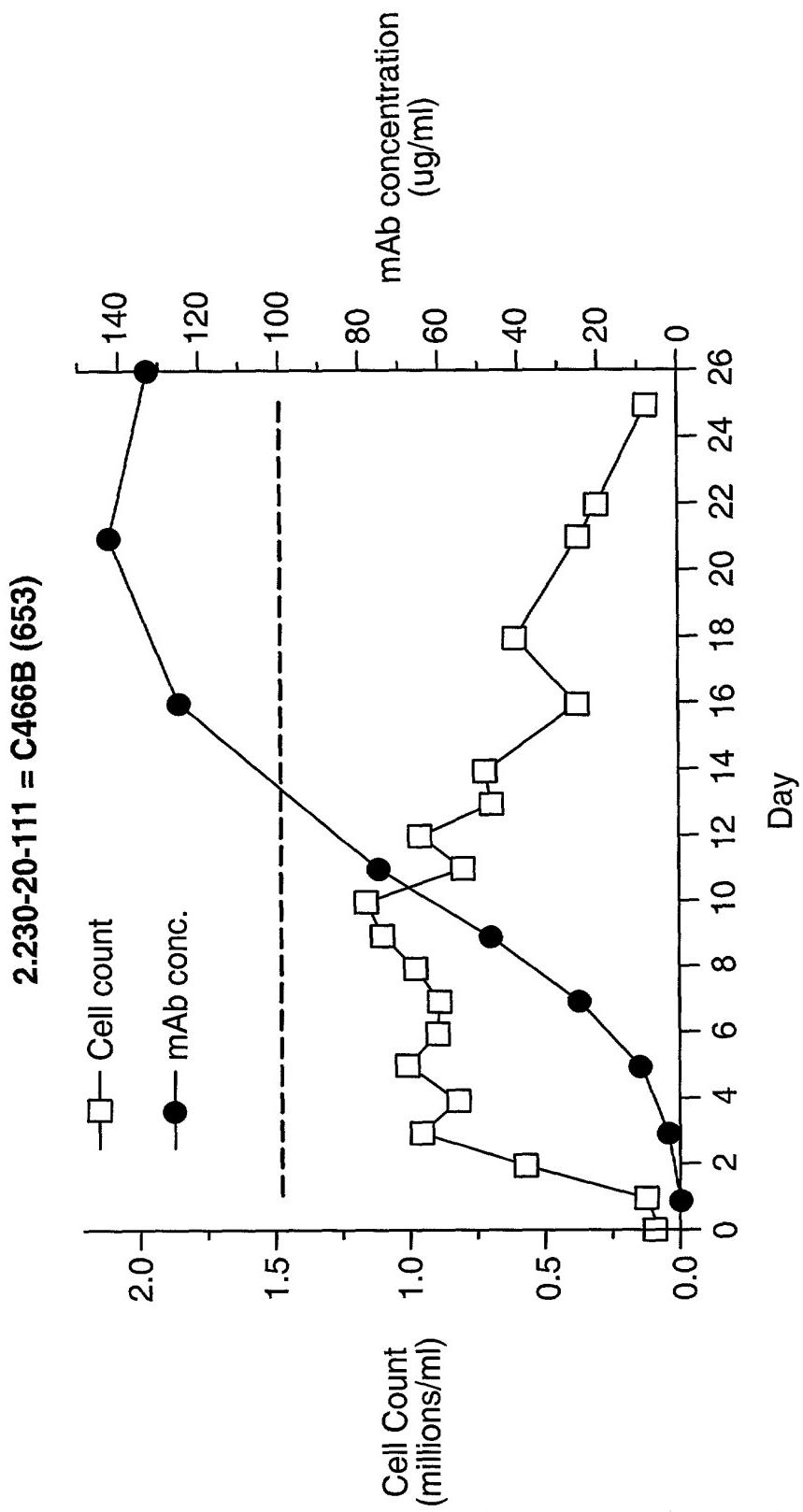
FIG. 7A

2.320-17-36 = C466A (653)



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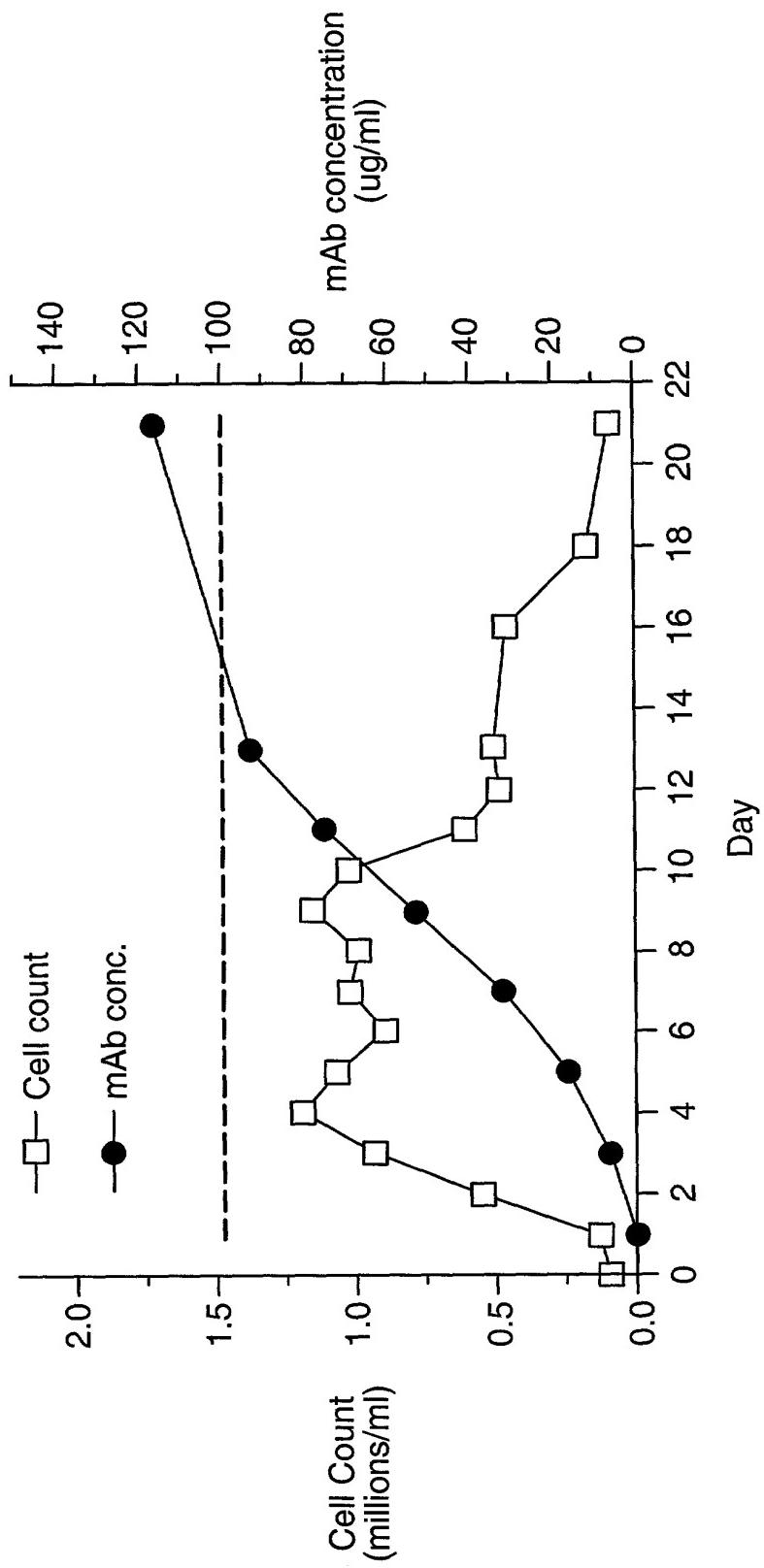
FIG. 7B



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FIG. 7C

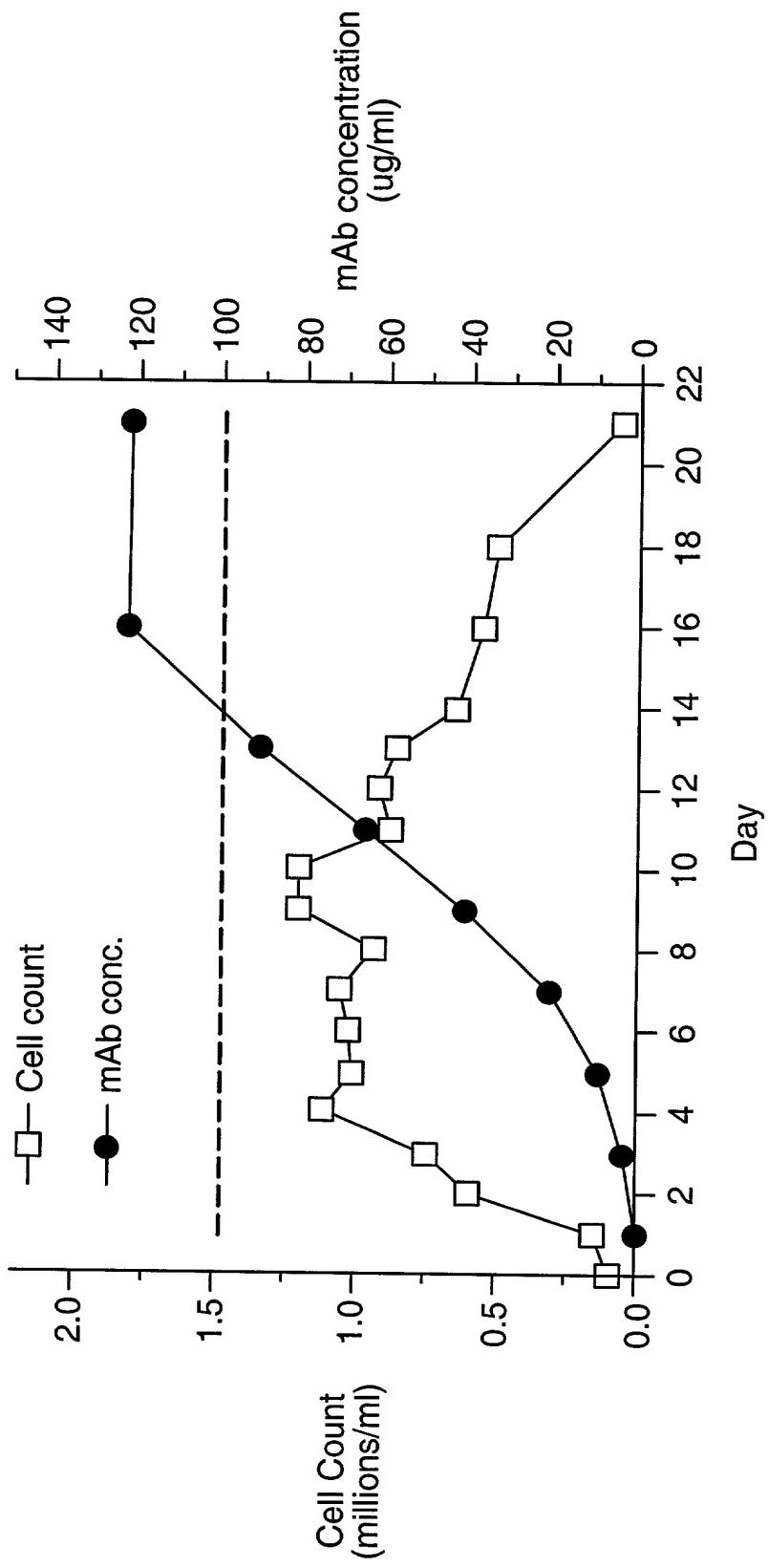
2.230-17-4 = C466C (653)



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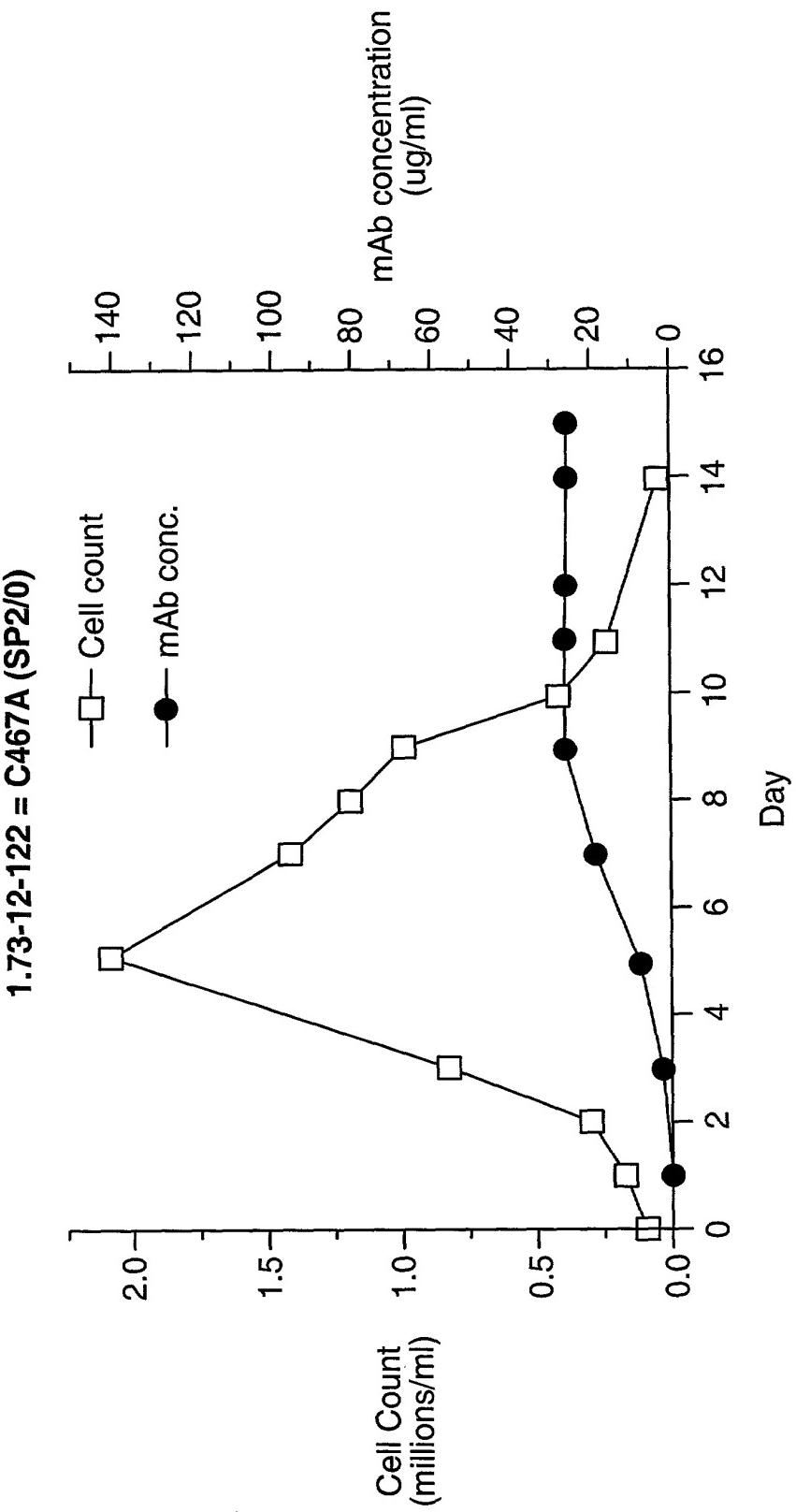
FIG. 7D

2.320-20-99 = C466D (653)



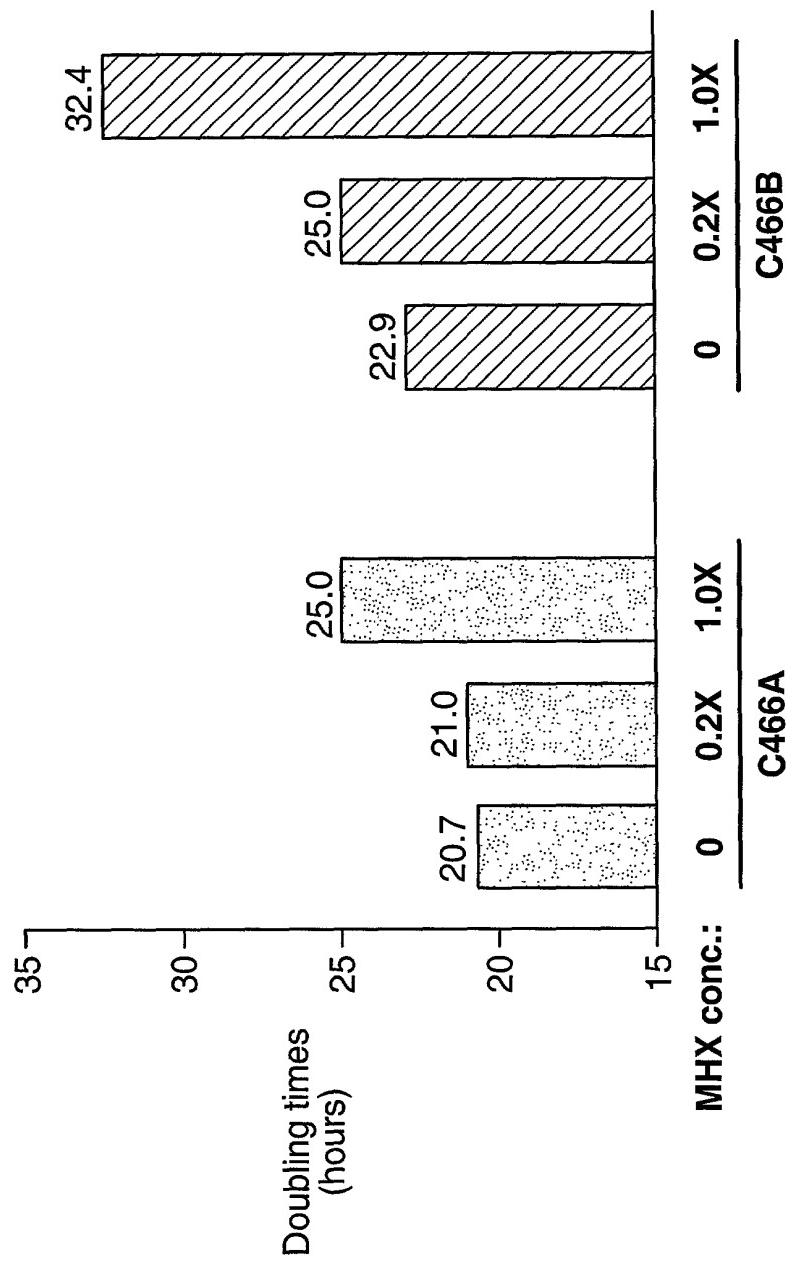
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FIG. 7E



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FIG. 8



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FIG. 9A

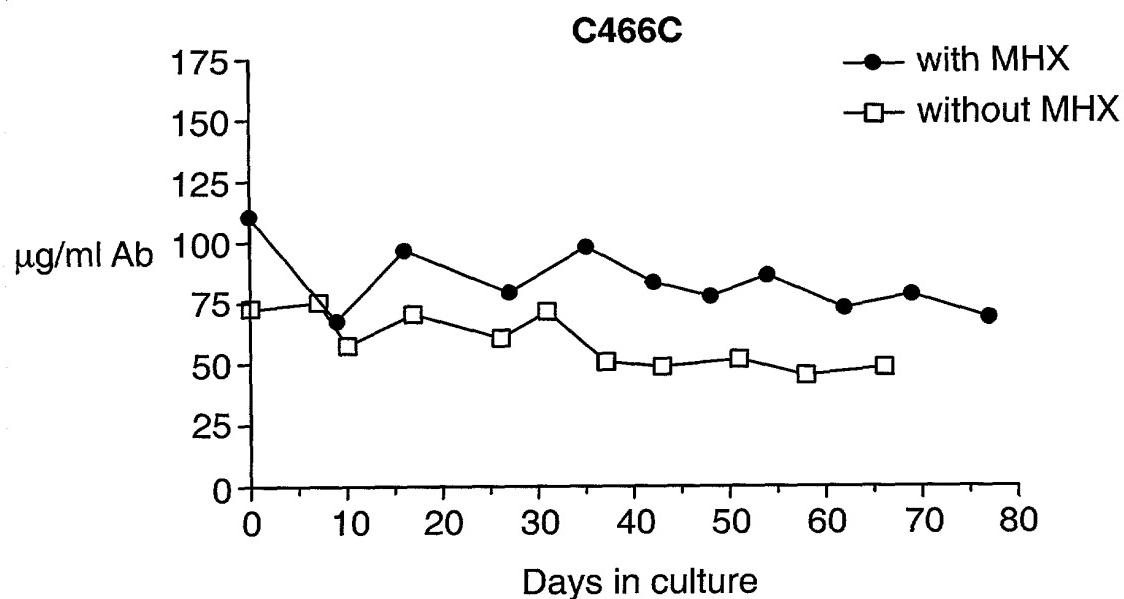
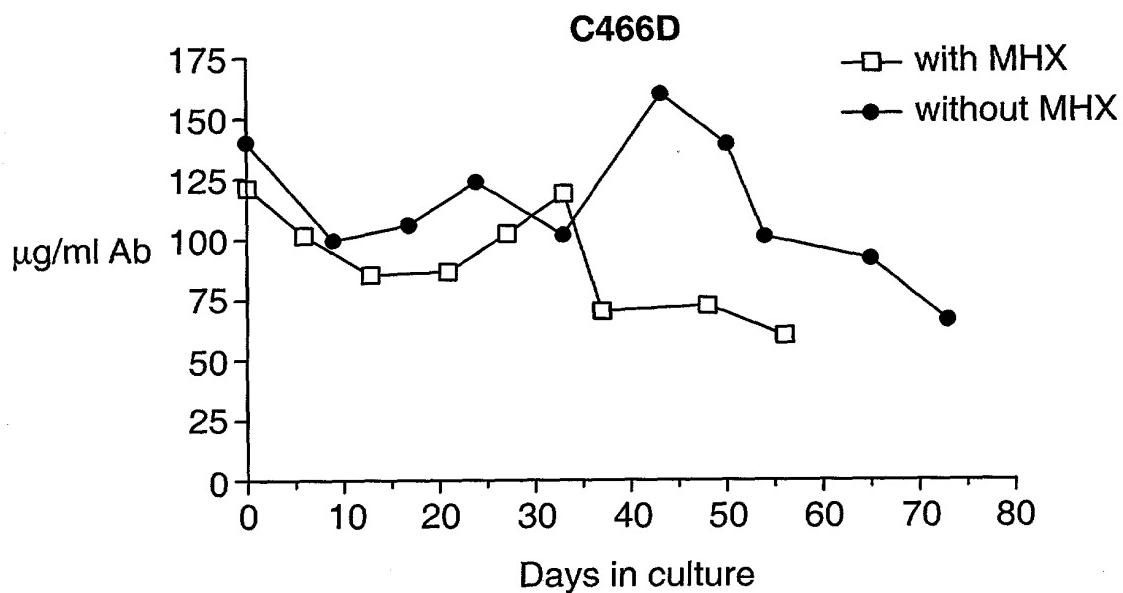


FIG. 9B



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FIG. 10

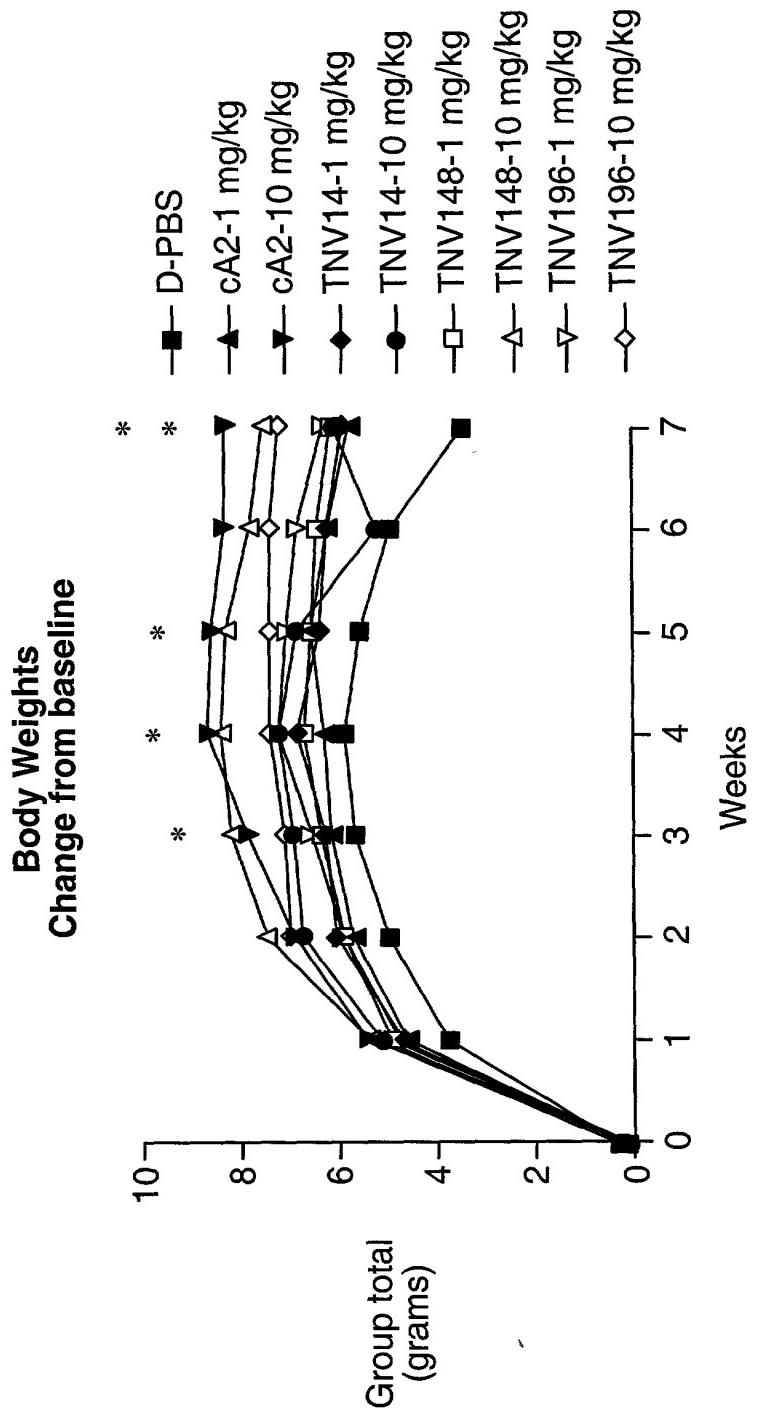
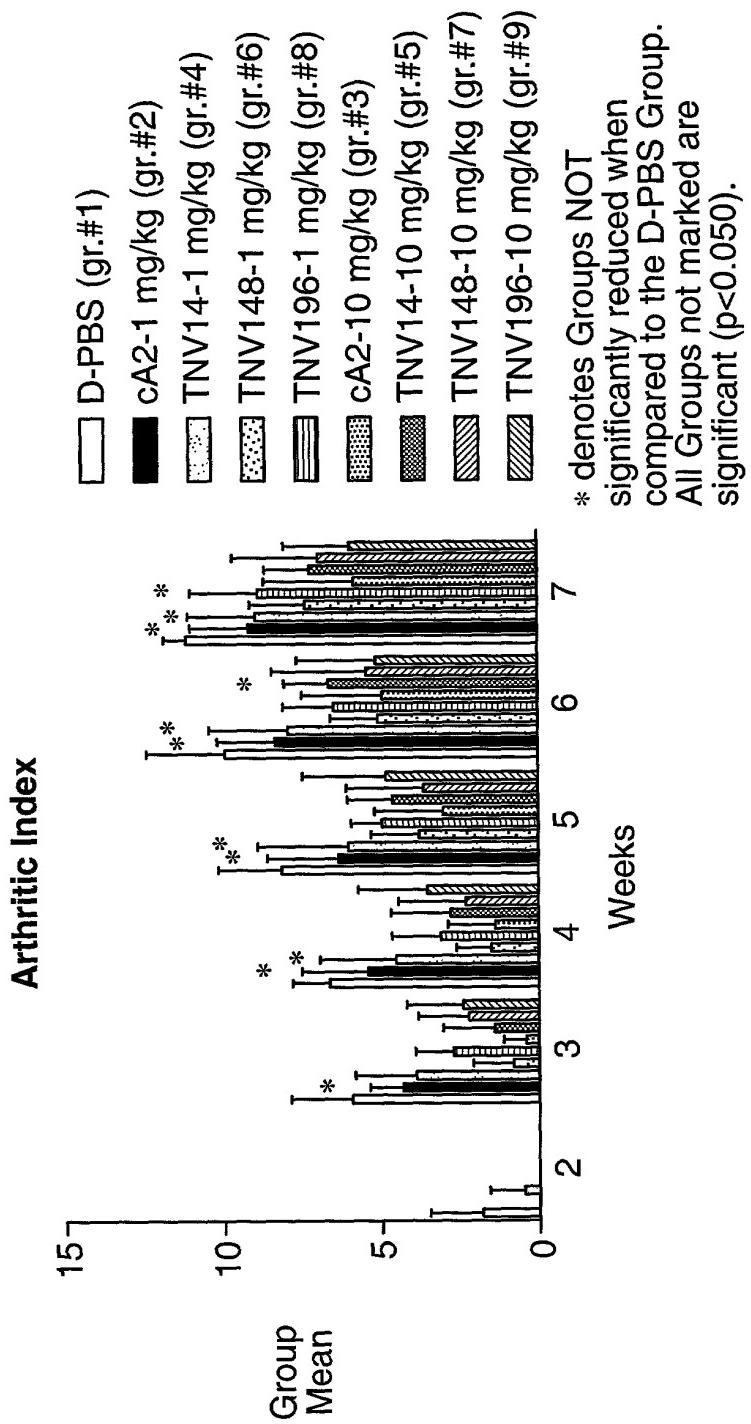
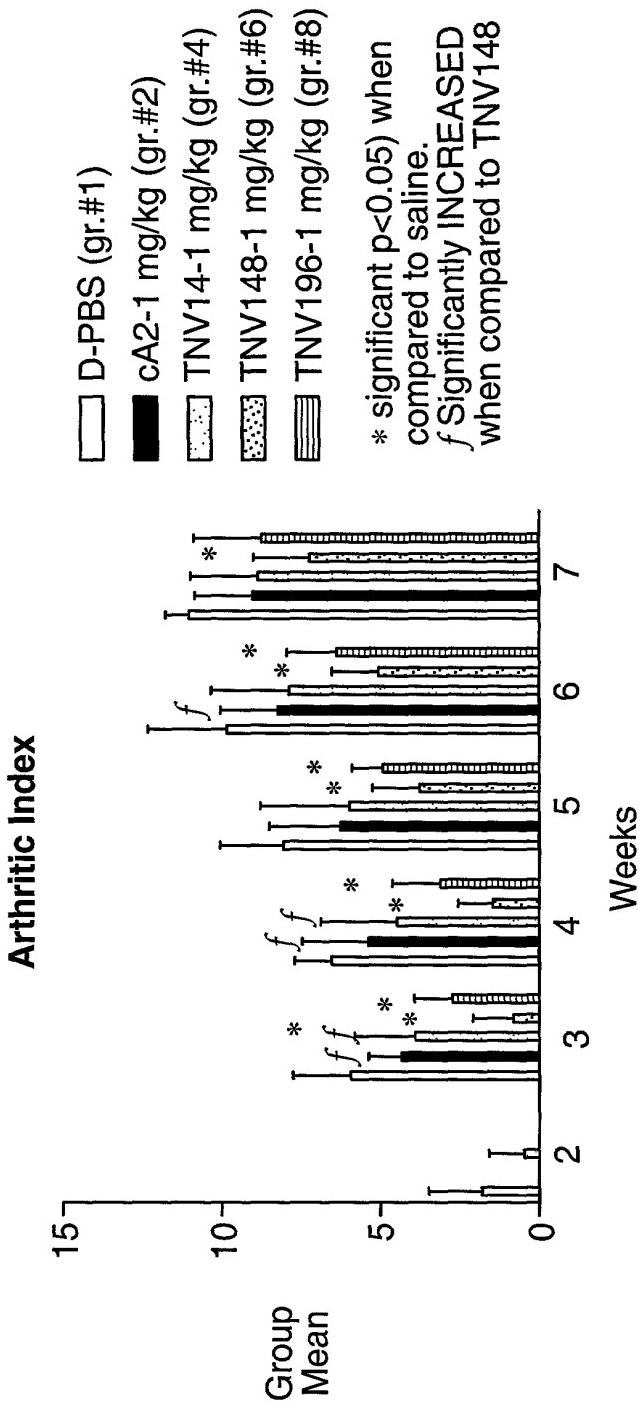


FIG. 11A



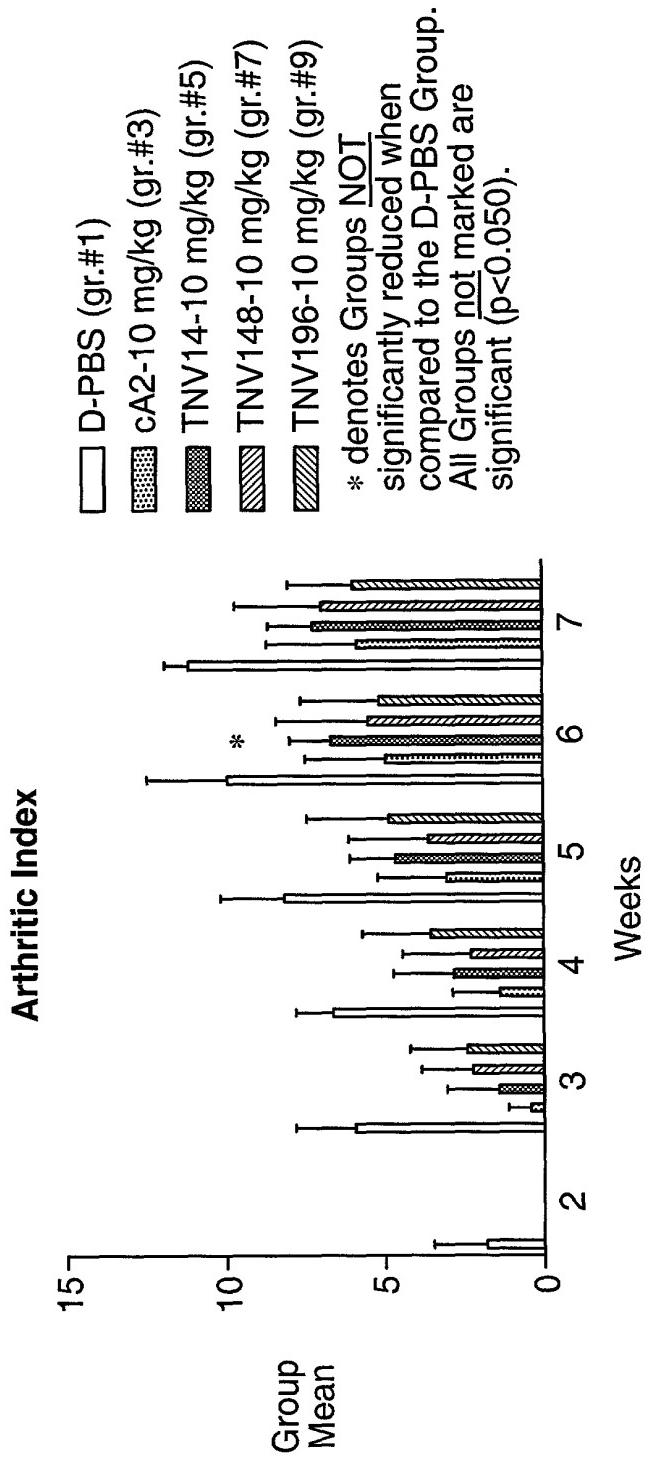
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FIG. 11B



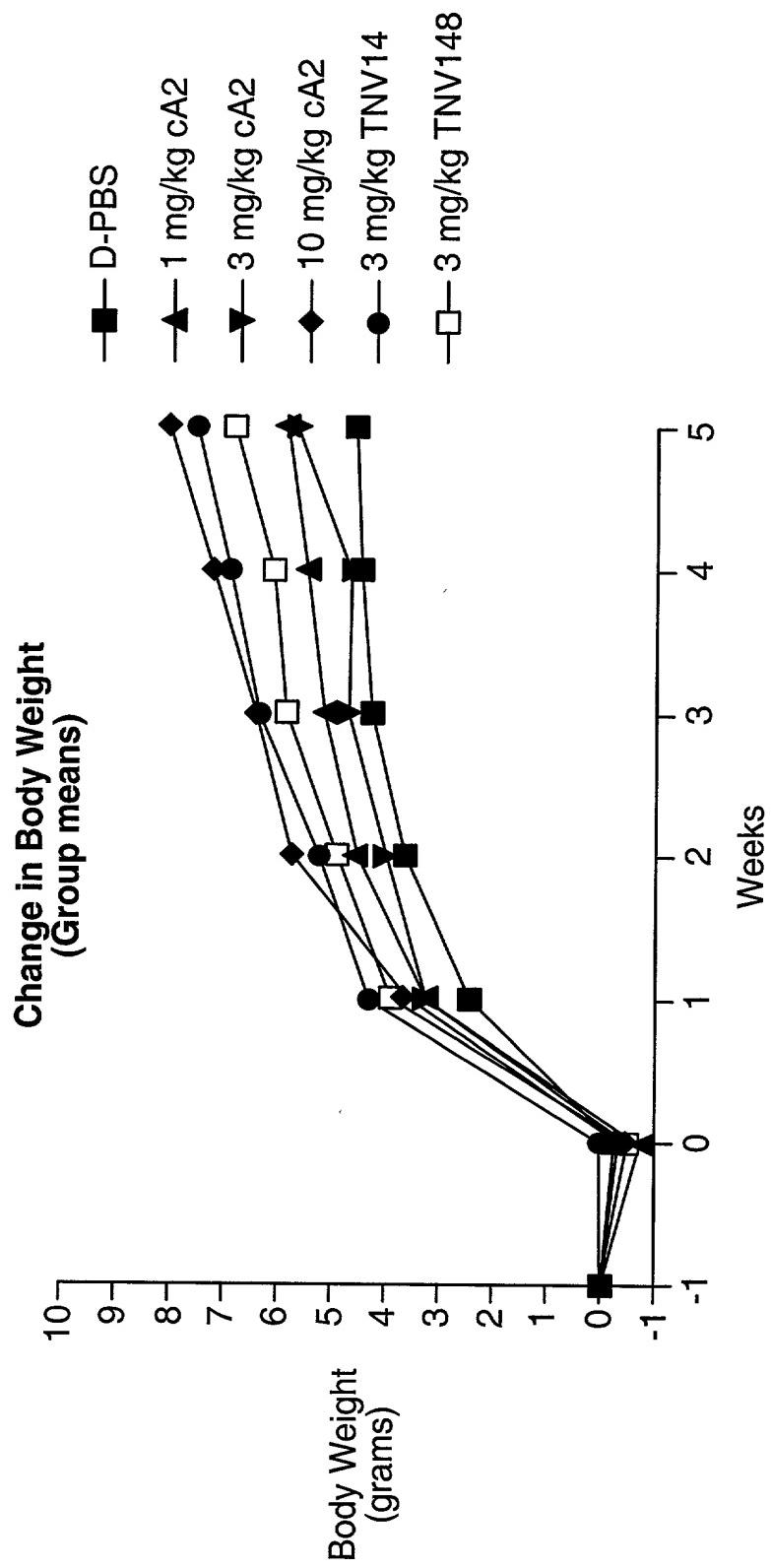
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FIG. 11C



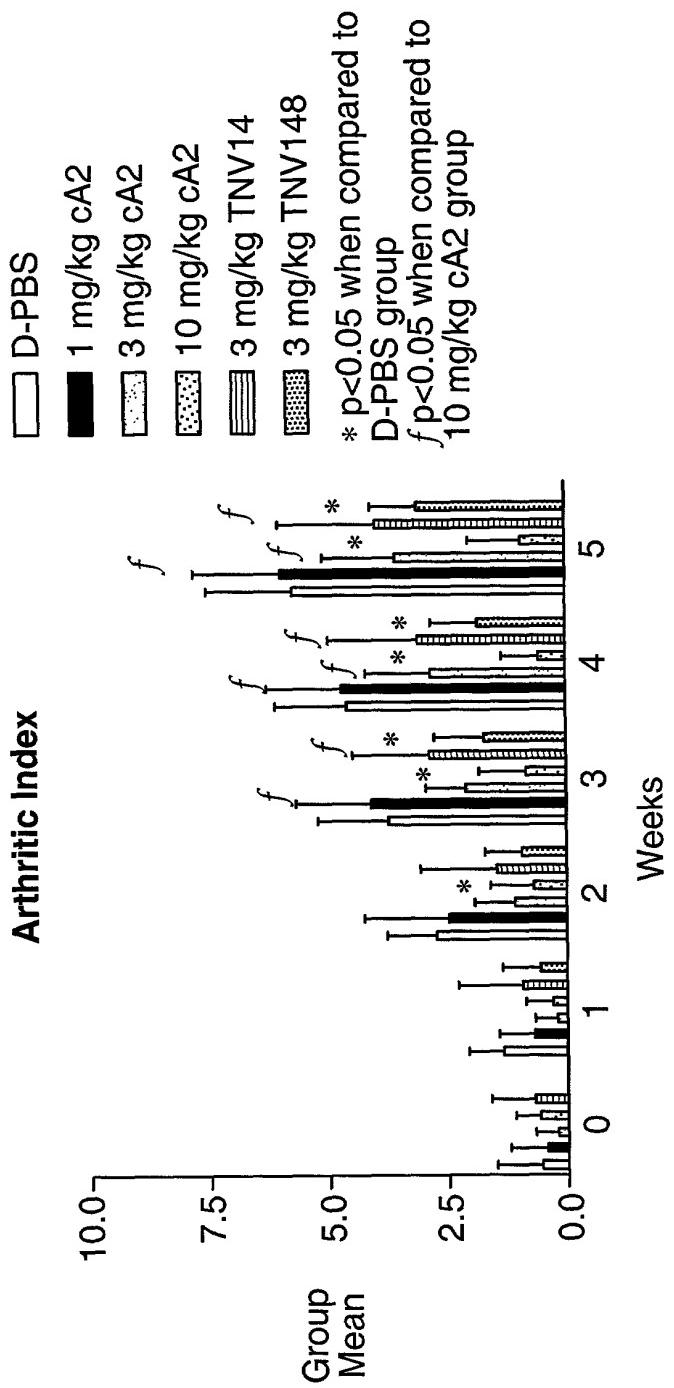
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FIG. 12



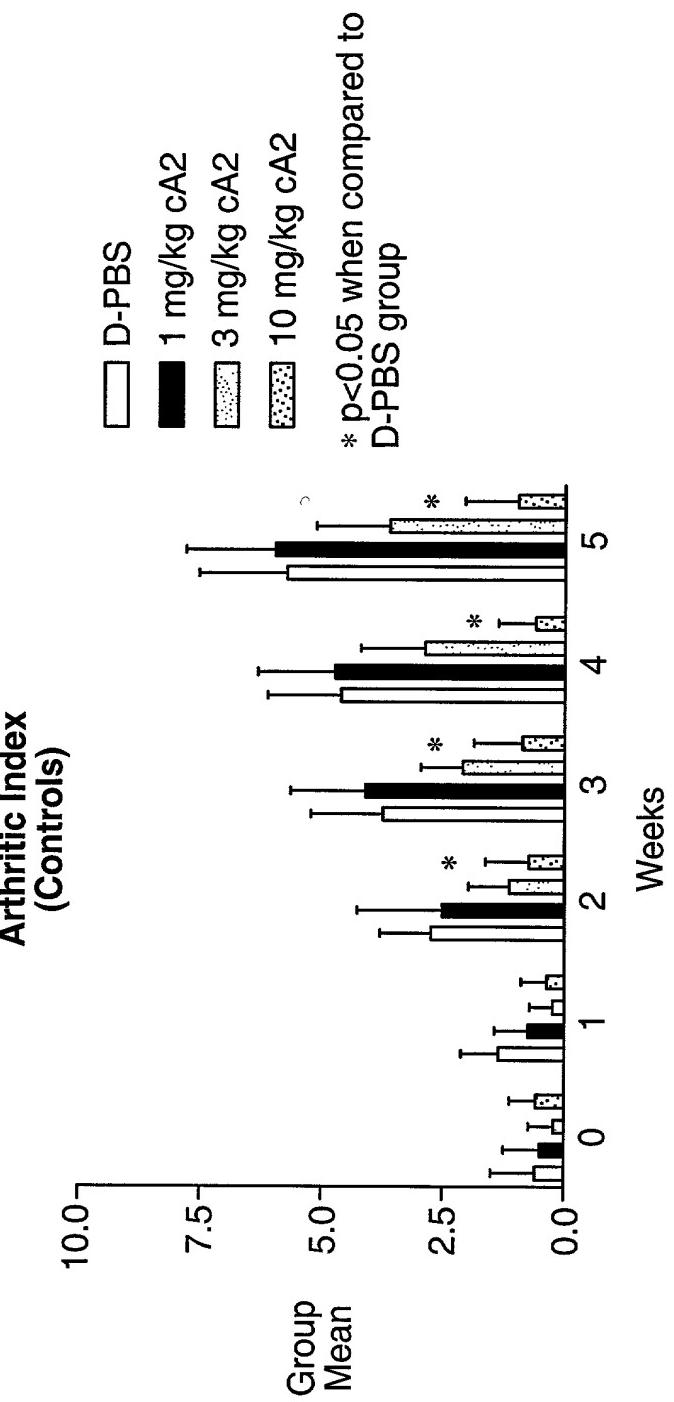
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FIG. 13A



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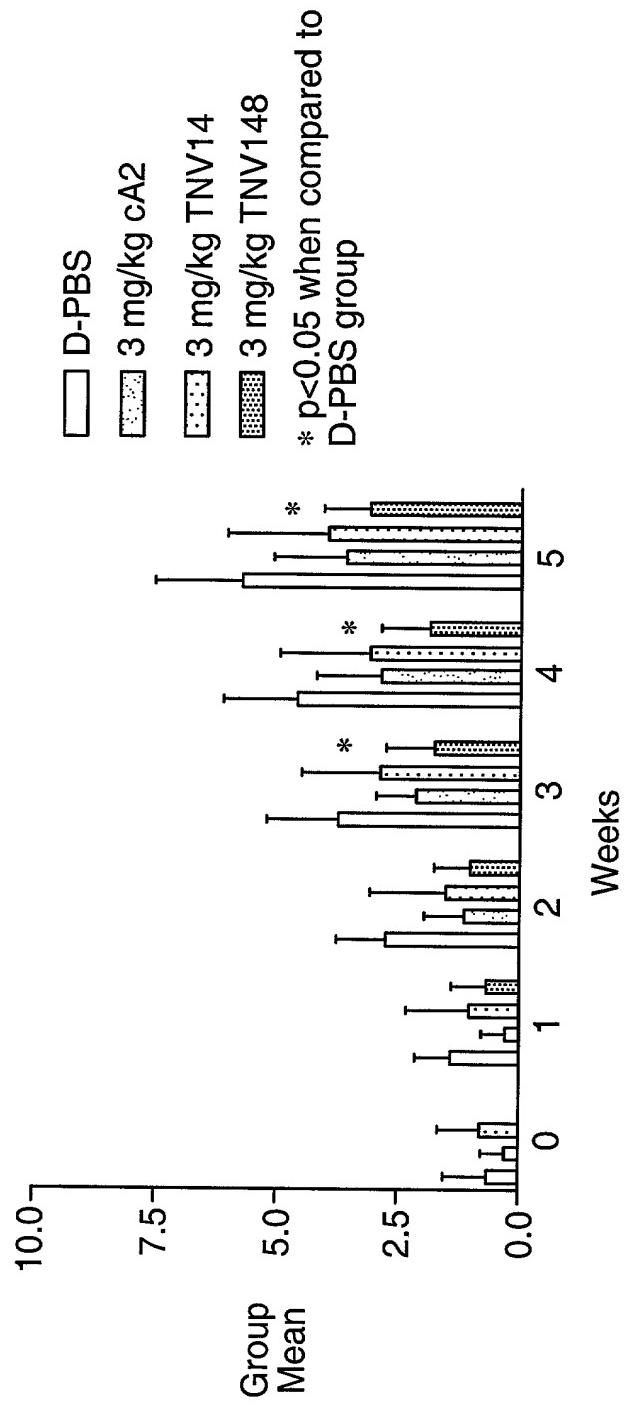
FIG. 13B



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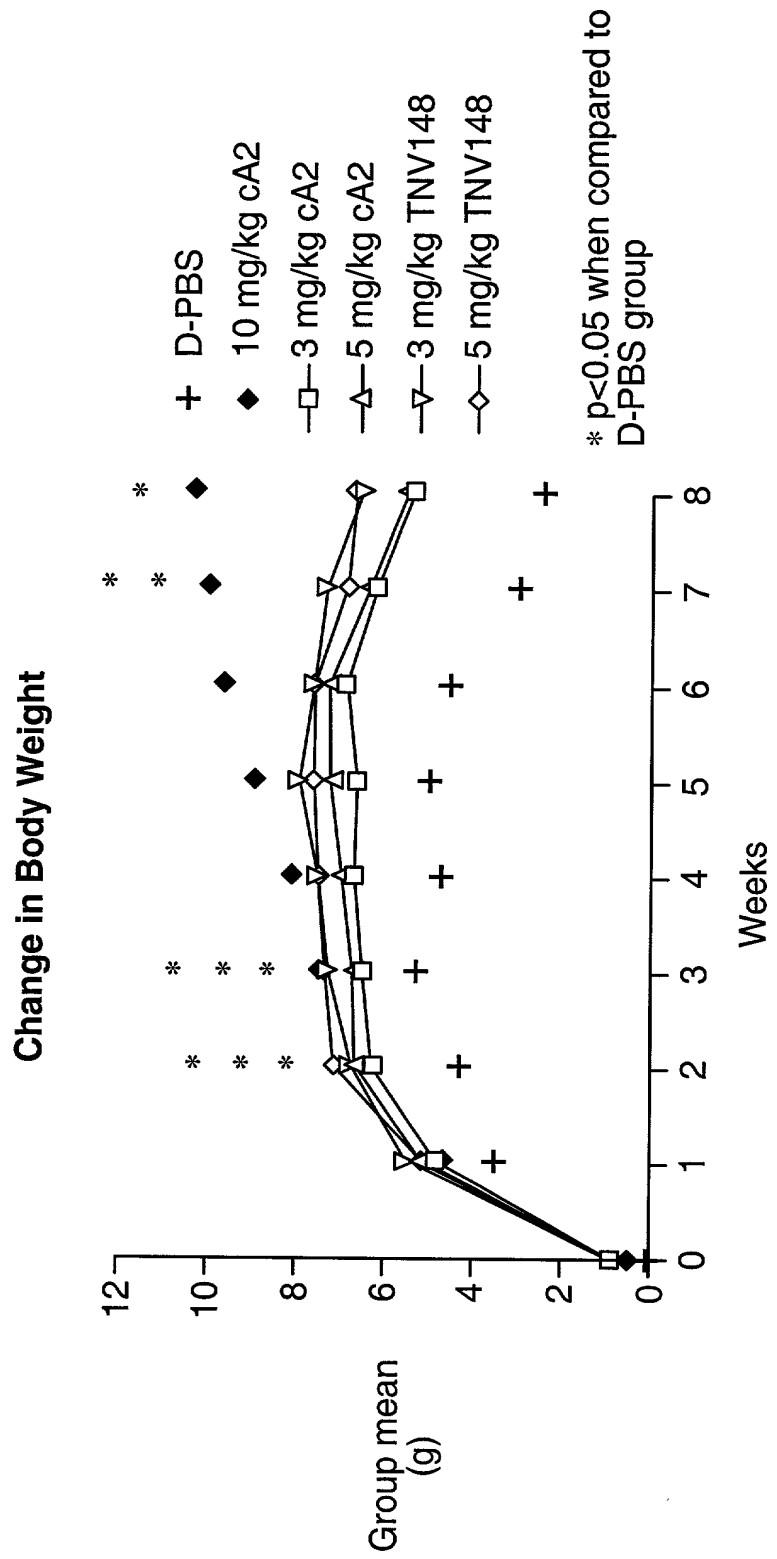
FIG. 13C

Arthritic Index



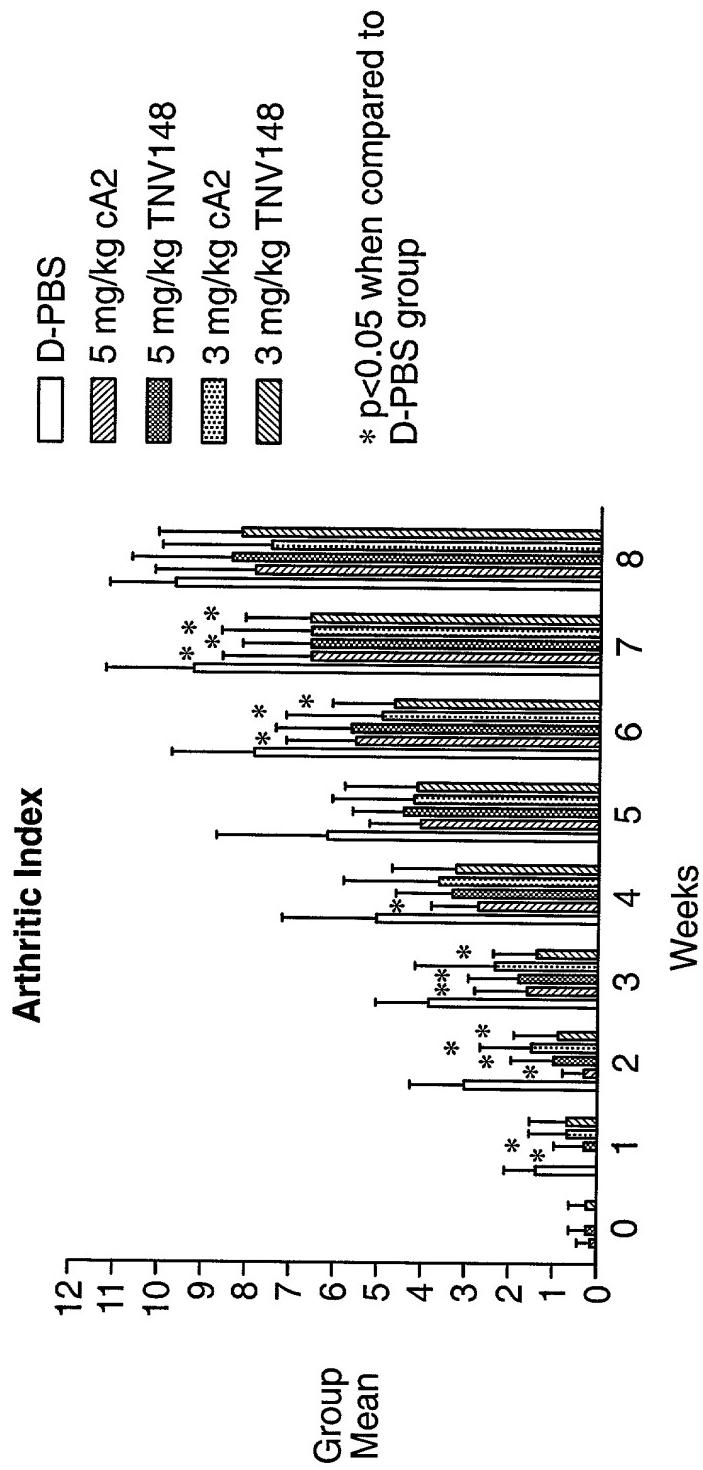
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FIG. 14



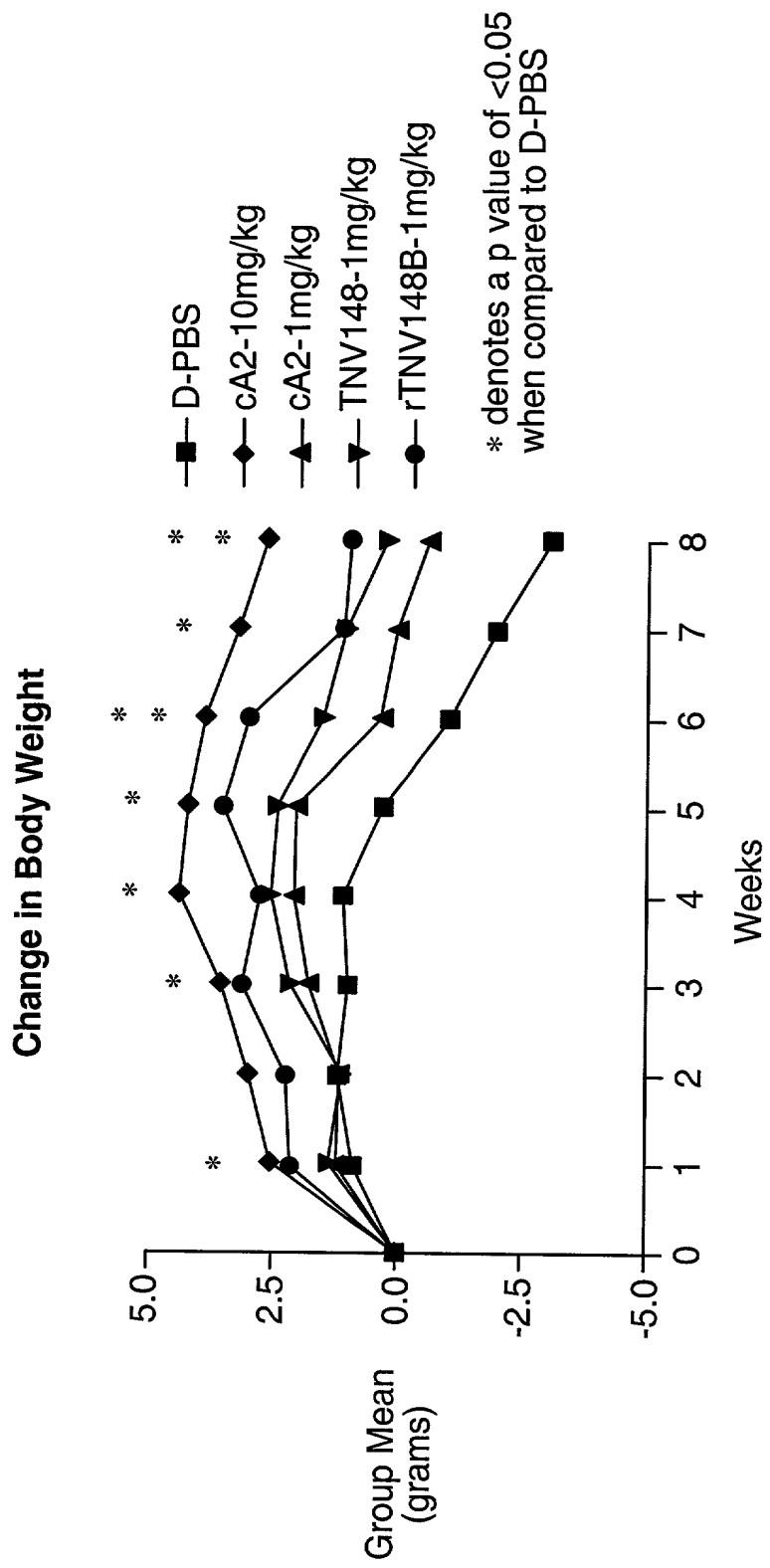
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FIG. 15



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FIG. 16



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FIG. 17

Arthritic Index

